



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,869	12/21/2005	Thomas Henry Bell	KC-0164	1398
34610	7590	10/27/2008	EXAMINER	
KED & ASSOCIATES, LLP			SCHNEIDER, CRAIG M	
P.O. Box 221200				
Chantilly, VA 20153-1200				
			ART UNIT	PAPER NUMBER
			3753	
			MAIL DATE	DELIVERY MODE
			10/27/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/561,869	Applicant(s) BELL, THOMAS HENRY	
	Examiner CRAIG M. SCHNEIDER	Art Unit 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-12,14-18,27 and 28 is/are pending in the application.
- 4a) Of the above claim(s) 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-12,14-18 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/21/05 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claim 28 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 1/8/08. The other claims that were withdrawn are 5, 7, 13, and 19-26 but they have been cancelled in the reply filed 8/25/08

Drawings

2. The drawings were received on 8/25/08. These drawings are not acceptable.

3. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures.

Note: The drawings submitted on 8/25/08 for this objection will satisfy the above objection when the below objections are satisfied.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "303" located on page 18, line 21.

Note: The specification amendment dated 8/25/08 indicated the incorrect page (16 instead of 18). Therefore the drawing objection is still present on page 18.

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the cage of claim 1

Art Unit: 3753

must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The disclosure is objected to because of the following informalities:

On page 16, line 13 a paragraph was added on 8/25/08 that is a duplicate from page 18, line 13 with a minor change. This paragraph should be deleted.

On page 18, line 21 "303" should be --203--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1-6, 8-12, 18, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen (4,945,944).

Chen discloses a valve system (1) for use with a variable head of fluid, the valve system comprising a first diaphragm (51) and a means for (7, 6, 631, 61, 4, and 41) transferring a fluid pressure associated with the variable head of a first fluid to the first diaphragm wherein the position of the first diaphragm is controlled by the fluid pressure associated with the variable head of the first fluid; and a cage (area that 73 that 71 passes through) associated with the means for transferring a fluid pressure, the cage being adapted to prevent a back pressure acting on the means for transferring a fluid pressure (col. 2, line 63 to col. 5, line 64).

Regarding claim 2, wherein when the valve system is deployed the first diaphragm is located above the variable head of the first fluid as seen in Figure 6B.

Regarding claim 3, wherein the valve system is connected to a fluid supply line (2a) to the variable head of the first fluid such that the first diaphragm moves between an open position as seen in Figure 6A, wherein the first fluid is free to flow within the fluid supply line, and a closed position as seen in Figure 6B, wherein the first fluid is prevented from flowing within the fluid supply line.

Art Unit: 3753

Regarding claim 4, wherein the first diaphragm comprises a blocking means (chamber between 51 and 4) to assist the first diaphragm in moving to the closed position.

Regarding claim 5, wherein the means for transferring a fluid pressure associated with the variable head of the first fluid comprises a compressible second fluid (air)(col. 5, lines 3-17).

Regarding claim 6, wherein the compressible second fluid is contained within at least one tube (7) connected at a first end to the first diaphragm and positioned so that when in use the second end of the at least one tube is located below the surface of the head of variable first fluid as seen in Figure 6B.

Regarding claim 8, wherein the at least one tube is connected to the first diaphragm via a diaphragm valve (6).

Regarding claim 9, wherein the means for transferring a fluid pressure further comprises one or more chambers (61 and chamber between 51 and 4) located between the diaphragm valve and the first diaphragm.

Regarding claim 10, wherein the first diaphragm comprises an aperture (511) that provides a means for communicating a sample of fluid taken from the supply line to the one or more chambers.

Regarding claim 12, wherein the valve system further comprises an adjuster (73 and 74) wherein the adjuster provides a means for varying the dependency of the position of the first diaphragm to the fluid pressure associated with the variable head of the first fluid.

Regarding claim 18, wherein the diaphragm valve comprises a plunger (631) that assists movement of the first diaphragm to the closed position.

Claim Rejections - 35 USC § 103

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Hostetler (4,344,456).

Chen discloses all the features of the claimed invention except that wherein the adjuster comprises a means for varying the resistance to activate the diaphragm valve and further wherein the means for varying the resistance to activate the diaphragm valve comprises a bias means and an adjustment screw wherein the position of the adjustment screw defines the resistance force applied by the bias means to the diaphragm valve. Hostetler discloses a valve system wherein the adjuster (30, 34, 38, 40, 42, 44, 46, 48, 50, and 52) comprises a means for varying the resistance (46) to activate the diaphragm valve and further wherein the means for varying the resistance to activate the diaphragm valve comprises a bias means (50) and an adjustment screw (46) wherein the position of the adjustment screw defines the resistance force applied by the bias means to the diaphragm valve (col. 3, lines 9-30 and col. 4, line 34 to col. 5, line 32).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a spring adjustment device as disclosed by Hostetler onto

Art Unit: 3753

the diaphragm valve of Chen, in order to regulate the movement of the diaphragm valve.

11. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Tanikawa (2002/0124880).

Chen discloses all the features of the claimed invention except that wherein the valve system further comprises an automatic cut off means so that in the event of mechanical failure the first diaphragm is moved to the closed position and further wherein the automatic cutoff means comprises one or more sections of absorbent material such that when the first fluid is incident on the absorbent material expansion occurs so as to cause the first diaphragm to move to the closed position. Tanikawa discloses an absorbent material (203) that is used to close a valve (209) when the absorbent material comes into contact with a liquid as seen in Figure 2(a) and 2(b) (page 2, para. 21-22 and page 3, para. 32-33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize an absorbent material as disclosed by Tanikawa below the diaphragm valve of Chen, in order to ensure that if the water level rises to the point of the diaphragm valve the absorbent material will close the valve as disclosed by Tanikawa.

Response to Arguments

12. Applicant's arguments filed 8/25/08 have been fully considered but they are not persuasive. The applicant argues that the Chen reference fails to disclose a cage. The

Art Unit: 3753

examiner has indicated the cage that is provided by Chen in the above rejection. This cage would perform the functional and structural claim language.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CRAIG M. SCHNEIDER whose telephone number is (571)272-3607. The examiner can normally be reached on M-F 8:00 -4:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3753

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. M. S./
Examiner, Art Unit 3753
October 17, 2008

/John Rivell/
Primary Examiner, Art Unit 3753

Search Notes 	Application/Control No. 10561869	Applicant(s)/Patent Under Reexamination BELL, THOMAS HENRY
	Examiner CRAIG M SCHNEIDER	Art Unit 3753

SEARCHED			
Class	Subclass	Date	Examiner
137	403	2/12/08	CMS
137	413-415	2/15/08	CMS

SEARCH NOTES		
Search Notes	Date	Examiner
Search from J. Rivell	2/15/08	CMS
Inventor search in PALM (Bell, Thomas)	2/15/08	CMS
East and word search per attached	2/19/08	CMS
Updated search	10/17/08	CMS

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

--	--